

PATENT SPECIFICATION (11)

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(54) SCOT JUBILEE JET PROPELLER

(71) I, JAMES BOWMAN, "Hermione"
 11 Milton Place, Pittenweem, Fife, British, do
 hereby declare the invention, for which I
 pray that a patent may be granted to me,
 5 and the method by which it is to be per-
 formed, to be particularly described in and
 by the following statement:—

This invention relates to improvements in
 propellers mainly for marine purposes al-
 though the invention may be applied to
 10 aircraft, hovercraft or large volume, low
 pressure pumping of fluids and in the latter
 case high pressure can be obtained by having
 one propeller after another.

15 According to the present invention, a
 propeller has a frusto-conical shroud with
 conical inner and outer surfaces fixed to the
 blades of the propeller, a hub which in that
 region where the blades are attached in-
 creases in diameter in the direction in which
 20 the shroud decreases in diameter, and a boss
 attached to the hub which projects beyond
 the shroud at its low diameter end.

A ship makes considerable aeration im-
 25 mediately forward of the propeller which the
 cone by squeezing turns this soft water into
 more solid water. Further into the cone the
 blades and hub squeeze the water firmer still
 and thrust it aft. However in the region of
 30 the blades, a vacuum factor develops on
 conventional propellers which is overcome
 in the present invention by the increasing
 diameter of the hub together with the de-
 creasing diameter of the shroud so that the
 35 vacuum area becomes a pressure area. The
 boss extending clear of the shroud may be
 constructed and streamlined as is most
 suitable. The boss in a large deep-drafted

ship may be fitted with a non-return air
 pressure valve.

The invention is more particularly de-
 scribed with reference to the accompanying
 drawing of a sectional elevation through the
 propeller.

In the drawing a propeller with a hub 1
 45 has blades 2 which are connected to a shroud
 3 which is of frusto-conical shape with
 conical inner and outer surfaces. The hub 1
 is extended outside of the shroud by a boss
 4. It can be seen that the radius of the hub
 50 increases continuously in the region de-
 noted by lines AA where the blades are con-
 nected to the hub by an amount "d" and in
 the direction in which the diameter of the
 shroud is decreasing. The maximum and
 55 minimum diameters of the shroud are 28
 and 25 inches respectively. The length is 7
 inches making an angle of 18° which is con-
 sidered to give maximum efficiency.

The boss is hollow and defines with its
 60 walls and sealing plate 5 a chamber 6 wherein
 air can be pressurised by way of a non-
 return air pressure valve 7.

WHAT I CLAIM IS:—

1. A propeller comprising a frusto-
 conical shroud with conical inner and outer
 surfaces fixed to the blades of the propeller, a
 hub which in that region where the blades are
 attached increases in diameter in the direction
 70 in which the shroud decreases in diameter
 and a boss attached to the hub which pro-
 jects beyond the shroud at its low diameter
 end.

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COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale*

